

**ENHANCING CONSERVATION IN NEW HAMPSHIRE THROUGH  
GEOGRAPHIC INFORMATION SYSTEMS AND GEOSPATIAL  
TECHNOLOGIES**

**June 1, 2001 Meeting**

**at the**

**Society for the Protection of New Hampshire Forests**

**Minutes – 8/14/01 Draft**

*Welcome, Introductions, Brief Recap of Meetings to Date*

After brief introductions, Marcy Lyman welcomed meeting participants and provided a brief history of how this group came to be, including an overview of our GIS meetings to date. She noted that our previous meetings have helped clarify three priority areas for GIS-related activities: 1) infrastructure/data development and technology access; 2) education and training; and 3) providing GIS services to nonprofit conservation groups and communities. For this June meeting, meeting planners made a concerted effort to reach out to a broader group of practitioners and funders and invite others to join our discussions about enhancing GIS information and services for the benefit of conservation in New Hampshire. Marcy invited newcomers to continue to join our meetings in the future.

*Funder Update – Steps to Advance GIS Grantmaking*

Ann Fowler Wallace described how the funders who have hosted the meetings to date have taken steps to advance GIS grantmaking. In particular, at the January meeting, Bruce Pardoe invited practitioners to brainstorm and discuss collaborative or individual project ideas to help advance access and application of GIS in the state. Subsequent to the January session, ten GIS applications were received and reviewed by the Pardoe Foundation trustees. Of those ten applications, seven were funded totaling some \$87,000 in grant funds. Grant projects fell within the three priority categories described by Marcy earlier: Infrastructure and Data Development; Service Providers, and Education and Training. Ann made reference to the list of Pardoe GIS grants from March 2001 which had been distributed along with copies of today's agenda. In addition to the Pardoe Foundation grants, Ann noted that the Greater Piscataqua Community Foundation had approved a grant to Cooperative Extension for its Mobile Classroom Computer Lab – matching the Pardoe grant made in March.

Ann indicated that the McCabe Environmental Fund will be reviewing several GIS-related proposals for its September meeting (deadline today). Also, Cheryl Fischer from the New England Grassroots Environment Fund expects the Fund will continue to seek requests from small, community-based land conservation and environmental groups to help with their work, including GIS and mapping requests.

Ann noted that one of our interests as funders participating in these meetings is to help NGO practitioners understand and navigate the varied guidelines, interests, deadlines,

and grant programs of the numerous funders who are willing to consider support for GIS work in New Hampshire. As participants know, foundation deadlines do not always correspond well to the timing needs of nonprofits. As funders, we hope to explore if there are ways to help the applicant community better understand the various grantmaking programs out there, and at least make this process more transparent and accessible. Reaching out to invite new funders to join our meeting today is a first step in that direction. Meeting organizers are delighted to have a new group of practitioners and funders join us today, and hope that you will continue to join our future meetings.

### *The New Hampshire GIS Conservation Collaborative Vision Document*

Bruce Pardoe next led a discussion of the New Hampshire GIS Conservation Collaborative (NHGCC) Vision Document, walking through the highlights of the document and asking the group for comments and feedback. A variety of issues were raised. Helen Whyte asked whether the term “conservation” should be broadened in the Vision Statement section to include the concept of land use planning. There was broad agreement that adding language about land use planning makes sense. Further discussion ensued about broadening the focus of the Vision to go beyond conservation to encompass a larger range of data that could be well served by GIS. Fay Rubin explained that the GRANIT Advisory Committee already focuses on the bigger picture of GIS data in New Hampshire – transportation data, water resources, soils, emergency response planning, etc. She felt that this group should focus on conservation data. After discussion, the group concluded that retaining a focus on conservation and land use issues made sense. Ben Silberfarb asked if there was an available list of the basic data sets considered central to the GRANIT database. Fay indicated that this list is available in a data catalog that describes (in an overview manner) the currently available data layers. In addition, the GRANIT Advisory Committee is currently developing a statewide strategic plan for GIS in New Hampshire. As part of that process, the Committee is identifying a list of additional data layers that it believes should be part of the GRANIT database.

Kevin Peterson felt that the Vision Document lacked a description of the state’s ongoing role and responsibilities to develop and maintain GIS data layers, and that reference to state responsibilities should be incorporated. Kathy Orlando asked if this group would push to make sure data layers are made available by the state. There was agreement that our group could be in a powerful position to exert leverage on the state to fulfill its responsibilities in terms of support for data development and GIS infrastructure. The group agreed that securing New Hampshire’s long term commitment was something that should be a priority of any GIS Conservation Collaborative. That said, Bruce Pardoe noted that he was not willing to wait for the state to make this commitment, but wanted to continue to push forward on critical pieces of the GIS infrastructure and services in the interim. Both Ken Gallager and Fay Rubin noted that whenever state cut-backs are required, GIS is an area that suffers from budget pressures. They indicated that outside leadership and leverage could be very valuable.

Another issue raised by Kevin Peterson was whether this group, and funders in particular, should not press for making any new data developed with charitable funds publicly

available as a matter of policy. The group cited several examples where consultants had been hired with public funds to develop data, which then was not made publicly available, but rather remained the intellectual property of the consultants.

Helen Whyte asked about including the idea of leadership in the vision document – i.e. the Collaborative’s interest in playing a leadership role in advancing GIS and Geospatial Technologies for conservation purposes in New Hampshire.

Another question raised in discussion was whether this group should play the role of advocates for GIS in the state. Rich Cook noted that several of the group’s members were advocacy groups and that there is no reason why policy-related priorities identified by a Collaborative could not be added to the agenda of several of these advocacy groups.

Finally, the group asked if we could get more information about three GIS-related questions:

- What are the basic data layers needed?
- How can they be made available?
- What resources are needed to achieve this?

*How Technology is Enhancing Conservation: The TechRocks Experience and Response to the NH GIS Conservation Collaborative Vision*

Rob Stuart gave a presentation on *How Technology Can Be Used to Solve Lots of Old Problems*. He cited the funder collaborative example of the Conservation Technology Support Program (CTSP) as one example where funders and resource providers have come together to make available GIS technology and training to the nonprofit community. CTSP has been a joint venture of ESRI and Hewlett Packard Corp.

Rob noted that the internet will hopefully have a profound impact on GIS. He added that while GIS has been around for many years, it is not as integrated into decision-making as it needs to be. The ability to show on a map what parcels need protection can be transformative, but to fully achieve this vision GIS technology must be more accessible and better understood. For this reason, public outreach is an important element of any GIS-dissemination strategy, such as through public kiosks and maps. Aerial photos plotted on maps can be another valuable visual tool. The CTSP web site ([www.ctsp.org](http://www.ctsp.org)) includes examples and case studies of citizen data collection. Rob also made the point that design matters greatly in GIS maps – as good cartographic design can tell a compelling story. To this point, Rob described the most interesting set of maps he had ever seen -- which showed the relationship between native languages and old growth forests. Not surprisingly, there is a tremendous overlap between those two elements.

In terms of feedback to the Vision Statement, Rob made several points:

1. Emphasize standards – think of the internet as a climate for synchronicity, think about the end use of this data;

2. Peer to peer networking is the portal of the future. GIS should be available from multiple sites to facilitate broad distribution of information and penetration;
3. GIS should be the basis of policy decisions. The Vision Statement should refer to its use by advocates;
4. GIS makes sense of diverse data sets, and can be expanded beyond traditional data;
5. GIS can be an organizational effectiveness building tool (example might include maps of organizational members per legislative district).

Rob outlined the following ideas for the group to consider:

1. Broaden the organizations involved to include advocates and technical assistance providers;
2. Explore partnerships with the private sector – to help access their data;
3. Develop a GIS policy agenda for local, state and federal government;
4. Invest in collaborative data and tools development;
5. Develop a public outreach strategy – public maps, kiosks, etc.

Rob suggested several web-based resources on GIS:

ESRI [www.esri.com](http://www.esri.com)  
 CTSP [www.ctsp.org](http://www.ctsp.org)  
 Green Info Network [www.greeninfo.org](http://www.greeninfo.org)  
 CMAP (New York PIRG's community mapping program) [www.nypirg.org/cmap](http://www.nypirg.org/cmap)  
 GIS Data Depot [www.gisdatadepot.com](http://www.gisdatadepot.com)

### *Questions and Discussion*

Marcy Lyman opened up the meeting for questions re any of presentations and broader discussion of issues raised in the morning session. The following points were made:

- Humanware needs: while hardware/software and data development are all expenses, even higher, yet critical expense is the GIS analysts time
- Citizen data development offers promising avenues for GIS – consider a pilot project possibly using land trust volunteers or trained birders. Audubon is struggling with the volume of data being collected on avian species. Avian data is locational and considers habitat type. Training a group of volunteers to enter this data over the internet seems a real opportunity.
- The first focus has to be on proper data collection/methodology; the method of transmission of that data is not as critical.
- When you look at the local, state and regional level the accuracy of the data is very different. At the parcel and town level, accuracy is quite variable. \*\*
- There is a lot of volunteer data that has been and is being collected. We need ways to make this useful and available to people in the field. All data is inaccurate. Need system for access to data that has been collected, but may not have been “proofed” or checked. One idea is to maintain this data in a separate layer until it is “proofed,” with a note about accuracy.

- NH already has a lot of data, but it is underutilized. Not enough people know how to use it or know about it. There is a bottleneck in GIS users. We need to develop the skills of people to use this data.

\*\* Please note that while several participants raised this issue of the accuracy of the GIS data layers, Fay Rubin believes that a better term would be the “resolution” of the data. She noted that the GRANIT data is very accurate for the scale at which it was developed.

- Acknowledging that we have a lot of information that is vastly underutilized, the burning issues are education and outreach. We need to take the information that we have – all of which is available from GRANIT – and get people up to the basic level to make use of this data. This is where this group should be focused.
- Perhaps this group should consider more outreach and marketing about GIS data and services.
- Another dimension that needs resources and inclusion in the strategy: pay attention to the people behind the screen – methods, protocols, etc. In NH, we need to standardize and also to build bridges between land conservation and land use planning. Also need software development to support land protection within the land trust community particularly. There is a clamoring for a seamless database that can carry land conservation from beginning to end point. There is a real opportunity for GIS as a tool to help with this, to support the means of land conservation.
- Funders need to think about the intersection of funding opportunities. Find the moments in time when organizations are ready to move to the next step and help leverage this possibility. Moose Mountains Regional Greenways and the Center for Land Conservation Assistance are but two examples of this.
- Consider the idea that all projects incorporate both data development and outreach elements.
- Think about a Technology Fair to inform citizens what is available and how to access.
- There is a dearth of activities and hunger for information about new tools.
- Use existing technology venues to educate town officials: OSP conferences for planning and zoning board members, NHACC annual meeting, etc.
- Market to the public the availability of GIS Service Centers.

### *Hearing from Funders and Resource Persons New to the Group*

During the final portion of our meeting, we heard from a number of the funders and resource persons in the room about their programs and interests in GIS technology.

David Bartlett from UNH explained the New Hampshire Space Grant Program that he coordinates, which is funded by NASA. NH Space Grant has supported efforts of both GRANIT and Cooperative Extension to date, and expects to be shifting its funding toward the strategic planning efforts for the Geospatial Technology Resource and Training Center at UNH.

Gioia Perugini explained that the Cox Charitable Trust is interested in the intersection between conservation and land use and has been part of several sprawl/smart growth discussions in the region, learning about tools such as visualization programs, etc. Gioia is intrigued about the public awareness/outreach opportunities in the region, such as libraries, fairs, the internet. She sees that data development and access needs to be on a parallel track. Both the environment and educational opportunities could be of interest to Cox.

Julie Early of the Island Foundation described the Foundation's interests in land conservation and grassroots groups working in southeastern Massachusetts. In the New Bedford area, the Foundation is interested in supporting social justice, sustainable communities and fisheries work. She thinks the Resource Centers with a university connection are a good idea, and is hearing interest in similar ideas in southeastern Mass. Julie raised the question of scale. Wondering how to build the capacity of all the groups who would like to have GIS capabilities. How many groups can a funder support to bring this expertise in-house?

Dave Publicover noted that funders can help make best use of the GIS resource. This is expensive technology and without coordination and sharing of information, groups can tend toward creating their own GIS fiefdoms.

Kathy Orlando of Sweet Water Trust explained that the Trust began supporting GIS work as a means for coordinating and planning its own land conservation investment strategies. Sweet Water is interested in wilderness and connectivity and makes grants for large-scale wilderness preservation, including the science and mapping work needed to get there. It has been supporting development of maps in ME, NH, VT and the Adirondacks to show what has been conserved and the management status of those conserved properties. Vermont is much farther ahead on this than the other states in northern NE. Kathy thinks our group can be very useful in keeping those conversations going.

Jenny Russell of the Merck Family Fund noted that the focus of this meeting was a bit different from the way the Fund usually operates. Most of the projects that MFF supports use GIS, but MFF does not usually concentrate its grantmaking on the general topic of GIS technology. In terms of the Vision Statement, Jenny wonders about addressing the topic of the application of GIS technology, i.e. developing GIS for what purpose? She is intrigued with the training opportunities around GIS – circuit riders and more formal academic training. Given the Fund's cluster-based grantmaking program -- Northern Forests, Southern Appalachian region, some coastal regions – it would be interested in the broader application of this NH model.

Kevin Peterson from the Upper Valley Land Trust described the Wellborn Environmental Fund's new grantmaking program in environmental education. He expects to get local applications to support GIS work in elementary schools, etc. Don Cooke of GDT is already beginning this work on his own in the Upper Valley with an eye toward tying his efforts into broader GIS initiatives statewide. Kevin thinks that Cooperative Extension's

work would fit within the Wellborn guidelines, as long as the focus was on the Upper Valley region.

Dave Publicover noted that AMC is using GIS materials for its CO-SEED Programs, and wants ARC IMS to be available as an educational, school resource in the future.

Rich Cook noted that both maps and experiential opportunities offer an “aha” experience. He would like to bring the two together.

Brad Anderson is the Conservation Fund’s new rep in New Hampshire. The Fund is interested in supporting conservation-based GIS in the state.

#### *Action Items/Next Steps*

Bruce Pardoe outlined several action steps coming out of today’s meeting:

- getting greater clarity about basic data layers needed
- exploring opportunities to enhance access to data that is currently available working with NHACC, the RPC’s, etc.
- revising the Vision Document based on suggestions made today including urging the state to play an important role in GIS development
- incorporating specific applications for GIS tools in Vision Document
- developing work plans for each of the priority areas outlined in the Vision Document, once we settle on final language for that document

Rob Stuart noted that the information sharing function of this group seems very valuable and that there are ways that this communication could be facilitated electronically.

Several other areas were identified where the group might be helpful:

- developing common language for grant letters that encourage/emphasize open access to any of data developed through a grant;
- developing an inventory of funders that might be interested in this work;
- collecting lists of GIS-related grants from funders in the room;
- pulling together information/materials from the various funders present;
- considering a strategic design piece for this effort – such as the work of the Collaboration of Community Foundations for the Gulf of Maine;
- developing guidelines or standards for funders to help evaluate GIS applications (What should funders be asking about when reviewing GIS proposals); and  
*Note: point was made that CTSP standards for grant eligibility are very extensive and are geared toward larger groups. If guidelines are developed, consider tiered standards that would vary depending upon the size and sophistication of the group*
- developing a glossary of terms

Finally, in closing, Marcy encouraged participants to communicate with us by email re any other thoughts, needs, interests that might come to mind – or to offer any additional insights or feedback regarding today’s meeting. In the interim, once we have added

today's suggestions, Ann will send out the vision statement one last time, to encourage the group's final review and comments.